

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 5 Claim 1 (previously presented): An electronic circuit comprising:
- a servo control and ECC decoder circuit for controlling a removable media device to obtain encoded data from a removable media, and for performing a decoding process to obtain decoded data from the encoded data and storing the decoded data in an external memory;
- 10 a graphics decoding circuit for decoding graphics data held in the external memory to generate video data and audio data; and
- a memory controller to provide read and write access to the external memory for both the servo control and ECC decoder circuit and the graphics decoding circuit;
- 15 a communications pathway electrically linking the Servo control and ECC decoder circuit with the graphics decoding circuit to permit the servo control and ECC decoder circuit and the graphics decoding circuit to exchange information;
- wherein the graphics decoding circuit performs a graphics decoding process on the decoded data to generate the video data and audio data,
- 20 wherein the decoder circuit, the graphics decoding circuit, and the memory controller are either fabricated on a monolithic substrate or within a packaging substrate,
- wherein the servo control and ECC decoder circuit further comprises a register accessible by the graphics decoding circuit that indicates the location of decoded data in the external memory.
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Claim 2 (original): The electronic circuit of claim 1 wherein the graphics decoding circuit utilizes the memory controller to store the video data in the external memory.

- 5 Claim 3 (original): The electronic circuit of claim 1 further comprising video output circuitry for generating a video signal for an external display device according to the video data.

Claims 4 and 5 (cancelled)

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Claim 6 (previously presented): The electronic circuit of claim 1 wherein the servo control and ECC decoder circuit comprises a signal to indicate to the graphics decoding circuit that newly decoded data is available in the external memory.

- 15 Claim 7 (original): The electronic circuit of claim 1 wherein the servo control and ECC decoder circuit is adapted to decode data received from a digital video disk (DVD) removable media, or a compact disk (CD) removable media.

- 20 Claim 8 (original): The electronic circuit of claim 7 wherein the servo control and ECC decoder circuit is adapted to control a DVD-type drive, or a CD-type drive.

- 25 Claim 9 (original): The electronic circuit of claim 1 wherein the graphics decoding circuit performs a Moving Picture Experts Group (MPEG) type graphics decoding process to generate the video data.

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Claims 10 and 11 (cancelled)

Claim 12 (previously presented): An electronic circuit fabricated on a monolithic

substrate, the circuit comprising:
a servo control and ECC decoder circuit for controlling a removable media
device to obtain encoded data from a removable media, and for performing
a decoding process to obtain decoded data from the encoded data and
5 storing the decoded data in an external memory;
a graphics decoding circuit for decoding graphics data held in the external
memory to generate video data and audio data;
a memory controller to provide read and write access to the external memory
for both the servo control and ECC decoder circuit and the graphics
10 decoding circuit; and
a communications pathway enabling the servo control and ECC decoder circuit,
the graphics decoding circuit and the memory controller to exchange
information with each other,
wherein the decoder circuit, the graphics decoding circuit and the memory
15 controller are fabricated on the monolithic substrate,
wherein the servo control and ECC decoder circuit further comprises:
a first register indicating a first storage location in the external memory for
the encoded data from the removable media;
a second register indicating a second storage location in the external memory
20 for the decoded data which is decoded from the encoded data; and
a third register indicating a size of the decoded data.

Claim 13 (cancelled)

25 Claim 14 (previously presented): The electronic circuit of claim 12, wherein the second
storage location overlaps the first storage location.

Claim 15 (original): The electronic circuit of claim 12, wherein the graphics decoder

circuit further comprises:

a video head pointer indicating a first address where a newest video data is
stored in the external memory;

5 an audio head pointer indicating a second address where a newest audio data is
stored in the external memory;

a video tail pointer indicating a third address where an oldest video data is
stored in the external memory;

an audio tail pointer indicating a fourth address where an oldest audio data is
stored in the external memory,

10 wherein the video head pointer and the video tail pointer constitute a video
circular buffer in the external memory, and the audio head pointer and the
audio tail pointer constitute an audio circular buffer in the external memory.

15 Claim 16 (original): The electronic circuit of claim 15, wherein the graphics decoder
circuit stops the graphics decoding process when either the video head pointer
is about to write over the video tail pointer or the audio head pointer is about to
write over the audio tail pointer, so as to prevent loss of the video data or the
audio data respectively.

20 Claim 17 (original): The electronic circuit of claim 15, wherein the graphics decoder
circuit resumes the video tail pointer when the video tail pointer advances close
enough to the video head pointer, or resumes the audio tail pointer when the
audio tail pointer advances close enough to the audio head pointer.

25 Claim 18 (new): The electronic circuit of claim 1, wherein the communications pathway
directly links the Servo control and ECC decoder circuit with the graphics
decoding circuit, and the register accessible by the graphics decoding circuit
enables the graphics decoding circuit to directly access the decoded data

through the memory controller.

5 Claim 19 (new): The electronic circuit of claim 12, wherein the communications pathway enables the servo control and ECC decoder circuit, the graphics decoding circuit and the memory controller to directly exchange information with each other, and the second register is accessible by the graphics decoding circuit for enabling the graphics decoding circuit to directly access the decoded data through the memory controller.